REQ. NO. 3-9101-2

ASSAYERS (ONTARIO) LIMITED
33 CHAUNCEY AVENUE TORONTO, ONTARIO M8Z 2Z2 · TELEPHONE (416) 239-3527

CONTRACT REPORT NO. OSQ 83-00064

September 20, 1983

REF: 26 SQ23440
3-9101-2
TITLE: RECOMMENDED VALUES FOR URANIUM TAILINGS REFERENCE MATERIALS

Samples received were identified as follows:

UTS-1	bottle	# 964
UTS-2	"	# 750
UTS-3	"	# 736
UTS-4	"	#1024

Before the 5 subsamples of each bottle were taken, the sample in each bottle was mixed thoroughly. Subsamples were identified as 1,2,3,4 and 5.

PROCEDURE USED:

Ba:

1 gram portions were treated in teflon beakers with HF,HCL, and HNO_3. Ba pecipitated. The residue and $BaSO_4$ filtered off, dried and fused with lithium tetra borate, leached in diluted HNO_3, cooled and made to volume.

Blank and set of Ba standards were prepared in a similar way.

Ba was measured on A.A. using N_2O-C_2H_2 flame.

Total Sulfur:

Total sulfur was determined in Leco furnace using idiometric titration.

Sulfate:

Sample portion digested for 1 hour with 10 % HCL acid. Residue was filtered off, washed and dried. The S determined in Leco furnace using idiometric titration.

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MICROMEDIA

2pp

ASSAYERS (ONTARIO) LIMITED
33 CHAUNCEY AVENUE TORONTO, ONTARIO M8Z 2Z2 · TELEPHONE (416) 239-3527

Certificate of Analysis

Certificate No. _____ Date: September 20, 1983

Received _____ _____ Samples of Uranium Tailings

Submitted by Energy Mines and Resources Canada Att'n: Mr. Henry F. Steger

URANIUM TAILINGS SAMPLES

ELEMENT		UTS-1	UTS-2	UTS-3	UTS-4
			wt %		
Ba	1.	226	367	219	80
	2.	242	336	196	77
	3.	248	351	218	54
	4.	281	390	213	34
	5.	237	348	185	34
S (total)	1.	--	--	--	2.17
	2.	--	--	--	1.93
	3.	--	--	--	2.01
	4.	--	--	--	1.84
	5.	--	--	--	1.82
Sulfate	1.	.262	8.44	.782	.172
	2.	.298	8.51	.697	.172
	3.	.300	8.34	.760	.129
	4.	.265	8.72	.691	.150
	5.	.290	8.24	.662	.150

Bottle Numbers:

UTS-1, 964 UTS-3, 736
UTS-2, 750 UTS-4, 1024

ASSAYERS (ONTARIO) LIMITED

Per _____

Number/
Numéro

Lab #15

METRICLAB (1980) INC.
CASIER POSTAL 440, 3388, CHEMIN OKA
STE-MARTHE-SUR-LE-LAC, QUÉ., J0N 1P0
TÉLEX: 05-835543
TÉL.: (514) 473-0920

TITLE: RECOMMENDED VALUES FOR URANIUM TAILINGS REFERENCE MATERIALS

Dept. of Energy, Mines & Resources,
N.U.T.R.P.
555 Booth Street,
OTTAWA, Ontario.
Att.: Mr. H.F. Steger

RÉSULTATS # 0937215 COMMANDE # PROJET # DATE: 83-09-14

Contract Serial No. 0SQ83-00065
DDS File No. 26SQ.23440-3-9101-3 PAGE

RÉSULTATS D'ANALYSES/ASSAY REPORT

ÉCHANTILLONS SAMPLES	Ba ppm	Ba ppm	Ba ppm	Ba ppm	Ba ppm
	1	2	3	4	5
UTS-1	294	314	333	314	282
UTS-2	400	394	398	384	400
UTS-3	214	218	214	216	224
UTS-4	48	49	48	48	48

Sample Weight: 1 g. ±10% catch weights

Method: $HF-H_2SO_4$ attack in platinum dish until sulfiric fumes.
Dissolution in water, filtration, calcination, carbonate fusion, water dissolution, filtration to Ba carbonates.
Ba carbonate dissolved on filter paper with HCl-1-1 and hot water.
Sulfate precipitation over night.
Millipore filtration where the filter paper is run on XRF for evaluation vs a Ba std curve produced with same method.

3 pp

MICROMEDIA
NOV 9 1983

METRICLAB (1980) INC. H Blais

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Dept. of Energy, Mines & Resources,
M.U.T.R.P.
555,Booth Street,
OTTAWA, Ontario.
Att.: Mr. H.F. Steger

RÉSULTATS # 0937215
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PAGE

RÉSULTATS D'ANALYSES/ASSAY REPORT

ÉCHANTILLONS SAMPLES	SO_4 %	SO_4 %	SO_4 %	SO_4 %	SO_4 %
	1	2	3	4	5
UTS-1	1.83	1.83	1.81	1.80	1.84
UTS-2	.66	.66	.67	.64	.66
UTS-3	.04	.05	.06	.05	.05
UTS-4	3.57	3.69	3.52	3.53	3.51

Sample Weight: 2 g. ±10% catch weights.

Method: One (1) hour leaching in boiling 10% HCl.
Filtration.
Precipitation with $BaCl_2$.
Gravimetric finish.

METRICLAB (1980) INC.

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RÉSULTATS D'ANALYSES/ASSAY REPORT

ÉCHANTILLONS SAMPLES	S(tot) %	S(tot) %	S(tot) %	S(tot) %	S(tot) %
	1	2	3	4	5
UTS-4	1.76	1.77	1.75	1.73	1.72

Sample weight: 0.1 g. ±10% catch weights.

Method: Leco induction furnace, SO_2 evolution, Iodide-Iodate titration with a maximum reading of 2% on burett.

METRICLAB (1980) INC.

POOR

QUALITY

ORIGINAL